

GENERA PISCUM: Work in Progress

BY GILBERT P. WHITLEY

David Starr Jordan, in his *Genera of Fishes* and *Classification of Fishes*, tried to place each genus and subgenus of fishes, living and fossil, named between the years 1758 and 1923, in its proper family, without necessarily distinguishing between valid names, preoccupied names and synonyms. His tremendous work was published by Leland Stanford University, Palo Alto, California, between 1917 and 1923 and was out of print for some time before being reprinted in 1963 with a new foreword by George S. Myers and a comprehensive index. In the course of its preparation, Jordan had specially mentioned my late mentor in ichthyology, Allan R. McCulloch of the Australian Museum, Sydney, to whom Jordan wrote (*in lit.*, 16 May, 1922), "I have been more indebted to you than to anyone else of the men whose help I have called for," a striking tribute to Australia, for one would have expected that most assistance would have been forthcoming from older countries with their greater library resources. Yet McCulloch had managed to compile his data, by great personal diligence, far removed from all the classic centres of learning and at a time when one had to wait at least six months for a reply to a letter to the other side of the world. Since 1925, when McCulloch died, the increase in new names for genera and species of fishes has been phenomenal and the task of keeping up-to-date his manuscript lists and his card-index has grown accordingly.

Since there was no one else to do it, the present writer, McCulloch's successor as Curator of Fishes at the Australian Museum until 1964, decided to try to keep apace with the growing spate of genera (and incidentally with a selection of the even greater flow of new species, though these do not concern us here). This involved analysing the relevant literature, adding new or overlooked generic names to the families listed in McCulloch's now ageing exercise books, and writing so many card-index slips that the supplement to McCulloch's catalogue has exceeded its parent in size. Fools rush in where angels fear to tread, it is said, and one is only too conscious that what has been attempted in Sydney may or should have been done better in some other city. However, no sign of any similar undertaking appears to have emerged elsewhere. Indeed, it has been stated that no one in the United States at least has been found with both the ability and the time to carry through such an extensive revision. My own labours fall far short of the target aimed at and (to mix metaphors) have failed through trying to put new wine into old bottles. The whole task is really a continually changing process, which will have to be finished by other hands; the reader is asked to excuse the overuse of the personal pronoun in the sketch which follows of what this writer has attempted.

In March 1929, I commenced a handwritten alphabetical list of the names of fish genera by copying out all those in Jordan's indexes and amalgamating all additional ones. When I started this "Genera Piscium," as I called it, the whole of Sherborn's great *Index Animalium* had not been published, but Mr. C. D. Sherborn was mailing duplicate printers' proofs of it to his friend, Mr. Tom Iredale, then conchologist at the Australian Museum, who shared this treasure with me and also, over the years, helped me from his own taxonomic and bibliographical experience, for which I cannot adequately express my thanks. In July 1929, I sent to Professor D. S. Jordan a list of about 675 generic names omitted from, or published subsequently to, his *Genera of Fishes*. Others were furnished to Mr. S. A. Neave for his *Nomenclator Zoologicus* when I was in London in 1937. Some were variant or amended spellings, rather than entirely new generic names.

As a result of personally reading line by line through Sherborn's *Index Animalium* (in proof as well as in print), McCulloch's manuscripts, Agassiz's *Nomenclator Zoologicus*, certain old French Dictionaries of natural history, the *Index Zoologicus*, the Prussian Academy's *Nomenclator*, Weber & de Beaufort's *Fishes of the Indo-Australian Archipelago* and much general literature, including the essential portions of the *Zoological Record*, I had listed by March 1951 about three thousand names additional to those in Jordan's works. To these I have added all the new generic names for Recent and fossil fishes proposed in later years until now there are many more additions than there are generic names for fishes dating from 1758 to 1923.

Scudder's *Nomenclator* and Bleeker's *Atlas Ichthyologique* may still yield a few more names to closer scrutiny, but not many, I think.

In May 1950, I estimated that about ten thousand different names had been proposed for fish genera between 1758 and 1950. It had taken me eleven years to check my manuscript list with Neave's *Nomenclator Zoologicus* which, like Sherborn's *Index Animalium*, was amazingly complete. I sent a supplementary list of some 400 names to Neave in September, 1952—I had missed some which he had included, and vice versa.

The number of generic names proposed for fishes is estimated as follows: Treated in Jordan,

<i>Genera of Fishes</i> , Part 1, for 1758 to 1833 (part)	1247
<i>Genera of Fishes</i> , Part 2 for 1833 to 1858	1872
<i>Genera of Fishes</i> , Part 3 for 1859 to 1880	2065
<i>Genera of Fishes</i> , Part 4 for 1881 to 1920	2561

Classification of Fishes,

Names overlooked, or published from 1920 to 1923	230
(Whitley, MS). Overlooked names, emendations, etc., 1758 to 1930	3137
New names proposed, 1931 to 1939	1100
New names proposed, 1940 to 1958*	1344

TOTAL, 1758 to 1958	13,556
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All of the names published between 1758 and 1958 (and some of later date) have been checked to ascertain which ones were preoccupied. Many genera fell in this process, some to rise again under fresh names. One is impressed by a sad wastage: probably about 36% of the thousands of names are superfluous (being *nomina nuda*, *nomina vana*, homonyms or preoccupied names, variant spellings, primary or secondary synonyms) out of a possible number of about five thousand *valid* genera of fishes (fossil and Recent) in the world.

The initials E. and O.E. are always appropriate to a compilation of this kind: "errors and omissions excepted."

In a subsequent paper, or series of papers, I hope to furnish an alphabetical list of the genera of fishes additional to Jordan, 1963. Mere variant spellings, misprints or superfluous emendations will be excluded and references to literature will be found in Sherborn, Neave (whose sixth volume is eagerly awaited) or the *Zoological Record*.

In work of this kind, accuracy, patience and fairness to one's antecedents should prevail over arbitrary treatments which may bring temporary advantages only. Experience has suggested to this writer that quite rigid adherence to priority is preferable to a continuing changing or partial modification of the rules of nomenclature perhaps only to suit the conveniences of a few specialised students during a brief period of time.

* The final year 1958 was selected as being the bicentenary of Linne's *Systema Naturae*, ed. 10 (1758). In 1758, Linne had established only 61 genera. From 1940 to 1950, 720 new genera of fishes were named and from 1951 to 1958, 624. Since 1958 several hundred new names have been proposed so that compilation never ceases.

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PRELIMINARY SAMPLE OF THE PROJECTED LIST OF GENERIC NAMES OF FISHES, ADDITIONAL TO THOSE IN JORDAN, 1963, IN ALPHABETICAL ORDER

To conserve space, citations show, at the most: (1) the generic name; (2) its author(s); (3) date (year) of publication; (4) reference, if not in standard nomenclators, with (5) type-species in parentheses (); (6) family name with the suffix-*(i)idae* omitted, or simply "foss." if the genus is fossil and of uncertain family; and (7) in the case of synonyms, the name regarded as a valid replacement, in square brackets, thus [=]; only primary synonyms are so noticed, since any others may be matters of opinion and liable to modification.

Lack of some rare books has prevented me from verifying or completing certain references.

There is considerable doubt whether the fossil Conodonts should be considered to have been fishes (it is not even certain whether they were vertebrates or invertebrates), so I have omitted them. A list of the genera of Conodonts has been supplied by Robert O. Fay, 1952, University of Kansas Paleont. Contrib., Vertebrata, Art 3: 60-206.

Nomina nuda, variant spellings, misprints, etc. are not listed. For example:

Ababes Gray, 1842, because it is a nomen nudum; *Abacion* Rafinesque, 1820, Annals of Nature 9, which is an insect, not a fish as indicated in Sherborn, 1932, Index. Anim. (2) 29, additions: 1; "*Abu*" and other names of Forskal, which may be in the Prussian Nomenclator Anim., 1926, but are not in Neave; and so on, down to *Zyrichthys* Swainson, 1839, a mere variant of *Xirichthys*.

Abantennarius Schultz, 1957. Antennar.

Abantis Jordan, 1925, foss. Carist. [Preocc. = Absalomichthys.]

Abcichthys Whitley, 1927. Scorpaen.

Abeichthys Parin, 1961. Exocoet.

Ablabys Kaup, 1873, Arch. Naturg., 39(1):80 (*taenionotus**) Scorpaen.

Abranches Smith, 1947. Gob.

Absalom Whitley, 1937. Carang.

Absalomichthys Whitley, 1933, foss. Carist.

Acahara Jordan & Hubbs, 1925. Cyprin.

Acanthalepis McCoy, 1846, foss.

Acanthapogon Fowler, 1938. Apogon.

Acanthocirrhitus Fowler, 1938. Cirrhit.

Acanthodes Fourmanoir & Crosnier, 1964, Cahiers Orstrom, 6: 23 (*fragilis*).

Scorpaen. [Preocc. by Agassiz, 1846, in fossil sharks, and wants new name].

* Type-species, by present selection, *Apistus taenionotus* Cuvier & Valenciennes, 1829. *Ablabys* replaces *Amblyapistus* Bleeker, 1875. The only Australian species is *Ablabys (Parocosia) slacksmithi* (Whitley, 1958), comb. nov.

And so on, for perhaps five thousand names or more, down to . . .

- Zonophichthus Whitley, 1930. Ophichthy.
 Zoropsetta Jordan & Gilbert, 1920, Foss. Fish Lompoc :3, foss. Pleuronect.
 [= Zororhombus].
 Zostericola Ilyin, 1927. Gob. [Preocc. = Zosterisessor].
 Zostericola Berg, 1933. Gob. [Preocc. = Zosterisessor, *pace* Neave].
 Zosterisessor Whitley, 1935. Gob.
 Zu Walters & Fitch, 1960. Trachipter.

References.

- Agassiz, L., 1846—Nomenclator Zoologicus, 1846, Index Universalis.
 Berg, L. S., 1940—Classification of Fishes, both Recent and fossil. *Trav. Inst. Zool. Acad. Sci. URSS.*, 5 (2): 86-517, figs. 1-190.
 Bleeker, P., 1862-1878—Atlas Ichthyologique, 9 vols.
 Follett, W. I and L. J. Dempster, 1965.—Ichthyological . . . Names and Works on which the International Commission on Zoological Nomenclature has ruled . . . *Copeia*, 1965 (4): 518-523.
 Fowler, H. W., 1964—A Catalog of World Fishes. *Q. J. Taiwan Mus.*, 17:1-62; later parts being issued.
 Greenwood, P. H., 1964—Jordan's Fish Genera. *Nature*, 204, Oct. 3, 1964: 7.
 Index Zoologicus, 1902-1912—Vol. 1, 1902 and 2, 1912.
 Jordan, D. S., 1917-1920—The Genera of Fishes, 4 parts: 1-576.
 ———, 1923. A Classification of Fishes: 1-244.
 ———, 1963. The Genera of Fishes and A Classification of Fishes. Reprinted: 1-800.
 Marschall, A. de, 1873—Nomenclator Zoologicus, Pisces: 61-98.
 Munro, I. S. R., 1952—An application of visible indexing to Systematic Zoology. *Austr. J. Mar. freshw. Res.*, 3 (1): 92-100, figs. 1-4.
 Neave, S. A., 1939-50—Nomenclator Zoologicus, vols. 1-5 and supplements (Vol. 6 was said to be in the press at the time of writing [1965]—G.P.W.).
 Preussichen Akademie der Wissenschaften, 1926-1938—Nomenclator Animalium (Berlin), vols. 1-5, the last one never completed. Authors were the late F. E. Schultze, W. Kükenthal and K. Heider.
 Rogers, J. S., 1953—Report of the Director. *Mus. Zool. Univ. Michigan*, 1951-1952: 25, fig. (Reproduction of card-form used in compilation of genera of fishes).
 Scudder, S. H., 1882—Nomenclator Zoologicus, 1: 1-376 and 2: 1-340.
 Sherborn, C. D., 1902—Index Animalium, 1758-1800.
 ———, 1922-1932—Index Animalium, 1801-1850, vols. 1-9, including addenda.
 Weber, M. and L. F. de Beaufort, 1911—Fishes of the Indo-Australian Archipelago, 1. (Index of names in all Bleeker's works, except his *Atlas Ichthyologique*).
 Zoological Record, 1864 to early 1960's. (Especially lists of genera at the end of each volume. Before 1870, there were no separate lists of new genera in the Zoological Record and no distinction was drawn between those of fishes and other animals until 1876. Emendations and substitute names began to be proposed in the 1872 volume and some of these were overlooked by other nomenclators. About the 1880's, examination of new names by the Recorders for possible preoccupation became superficial and, like their classical emendations, subsequently lapsed).